

## Sixth Sense Technology Workshop

Techfest is the annual science and technology festival of IIT Bombay. Following is the basic outline of the workshop that would be happening at **Techfest, IIT Bombay**.

The workshop is a secure platform for students to enter into the field of robotics and work on image processing .The workshop helps the students to learn all the basics and apply them in reality using our kits. The workshop helps the students to fight all the competitions related to robotics , Image processing , Aerial Robotics etc. The workshop would be taken up by the people in the industry having immense experience at the international level in the field Image Processing . The details of the workshop are as follows:

### **Content**

- Introduction to Sixth Sense Technology
- Introduction to Computer vision
- Digital Image Processing in Matlab
- Image Manipulation in Matlab
- Video acquisition and Manipulation
- Machine Control

### Topics to be covered HANDS ON SESSION

- Change a PowerPoint Presentation with your hands. Amazing it is , now use sixth sense technology to control a powerpoint presentation by using your hands, no Mouse or Keyboard is required.
  - Control Media Player with Hand Movements. Also learn to control your VLC Media player using your hands. Just wave the hand to stop or play , move your hand to the left to reverse or right for fast forward.
- Additionally students will learn about integrating Sixth Sense Technology with Robotics, A session will be kept on basic uC Programming and implement the following hands-on
- uC Programming and Motor Control



- Computer Controlled Robot Students Learn to control the Robot by sending commands through the Keyboard. It is the same as playing a racing game and controlling your car using ASW DX.
- Ball Following Robot The Students make a Robot which shall be able to follow a ball using the camera attached. The programming and concepts are taught in detail.

There will be no Hardware Kit, however implementation through MATLAB software will be shown.